



ENGINEERING OPERATIONS COMMITTEE
MEETING MINUTES
JULY 1, 2004 – 9:00 A.M.
AERONAUTICS COMMISSION ROOM

Present: J. Polasek B. J. O'Brien M. VanPortFleet
J. D. Culp M. Chaput J. W. Reincke
T. Fudaly C. Bleech T. Anderson

Absent: L. E. Tibbits J. C. Friend C. Roberts
E. Burns

Guests: M. Bott J. Grossklaus G. Mayes
D. Spencley

OLD BUSINESS

1. **Approval of the Minutes of the June 3, 2004, Meeting – J. Polasek**

The minutes of the June 3, 2004, meeting were approved.

NEW BUSINESS

1. **Pavement Selection: Eastbound I-96 Reconstruction, CS 82122 and 82123, JN 52803 – B. O'Brien**

The reconstruction alternates considered were an HMA pavement (Alternate 1 – Equivalent Uniform Annual Cost [EUAC] \$231,897/directional mile) and a jointed plain concrete pavement (Alternate 2 – EUAC \$202,831/directional mile).

A life cycle cost analysis was performed and Alternate 2 was approved based on having the lowest EUAC. The pavement design and cost analysis are as follows:

11.5" (279.4mm)..... Jointed Plain Concrete Pavement (16 jt spacing)
(Mainline Lanes 1 thru 6)
16" (406.4mm)..... Open Graded Drainage Course (Mainline Lanes 1 thru 6)
Geotextile Separator (Mainline Lanes 1 thru 6)
6" (152.4mm)..... Open Graded Underdrains
27.5" (685.8mm)..... Total Thickness

Present Value Initial Construction Costs \$2,312,362/directional mile
Present Value Initial User Costs \$731,705/directional mile
Present Value Maintenance Costs \$203,341/directional mile
Equivalent Uniform Annual Cost \$202,831/directional mile

2. **Revise Reflective Sheeting Material Specification for Warning Signs – M. Bott**

The present reflective sheeting material specification for warning signs calls for Type III high-intensity sheeting. Increasing truck traffic, changes in vehicular design, and the use of new headlamp types have challenged the effectiveness and performance of our roadway signs, especially those with sheeting that uses tiny glass beads. In 2001, ASTM added new sheeting classifications that are prismatic and utilize cube corner elements to reflect light. One classification, in particular, Type IX, was approved by ASTM for all signs and all applications where legibility brightness is important.

Traffic and Safety, supported by the Traffic Recommendation Committee, recommends using Type IX (fluorescent yellow) sheeting on all warning signs in lieu of Type III. The luminance contrast of a fluorescent sign is three times greater than ordinary signing. The benefits of prismatic sheeting are great, including improved 24-hour visibility for various drivers, vehicle types, and headlamps.

ACTION: The recommendation to use Type IX prismatic sheeting on all warning signs is approved. Mark Bott will coordinate the development of an implementation plan with the regions, TSCs, and Lansing quality assurance staff. The material will be added to the Qualified Products List and will be available for immediate use on all department signing work authorizations. This change will be effective for the FY 2005 construction program.

3. **Research Report, *Development and Evaluation of an Advanced Dynamic Lane Merge Traffic Control System for 3 to 2 Lane Transition Areas in Work Zones* – J. Grossklaus**

This research was conducted following the successful research and development of a dynamic lane merge system for a two lane to one lane merge configuration. The desired effect is to alleviate or reduce the negative impacts caused by aggressive driver behavior in work zones. The department, along with Wayne State University, developed the latest system and evaluated it in 2002 and 2003. Results indicate that a smoother traffic flow is achieved by using the system. The benefits included reducing the average delay per vehicle to pass through the work zone and a reduction in aggressive driving maneuvers.

The research report was summarized and an action plan was presented for approval.

ACTION: The research report is approved for printing and distribution. The Special Provision for Dynamic Lane Merge System will be revised, and a memorandum on work zone tools explaining the Dynamic Lane Merge System will be distributed to those involved in developing project traffic control plans.

4. **Guidelines for Trunk Mounted Attenuators (TMA) by Maintenance Work Forces – D. Spencley**

EOC previously approved guidelines for use of TMAs on construction projects. At that time, it was noted that guidelines should be developed for maintenance operations as well. The region engineers concurred with this action.

Editorial notations were discussed and changes were suggested.

ACTION: The guidelines will be revised accordingly and will be sent out for region review. They will be returned to EOC at a future date for approval.

(Signed Copy on File at C&T)

Jon W. Reincke, Secretary
Engineering Operations Committee

JWR:kar

cc:	G. J. Jeff	S. Mortel	K. Peters
	K. Steudle	D. Jackson	J. Ingle
	L. Hank	W. Tansil	J. Steele (FHWA)
	EOC Members	D. Wresinski	A. C. Milo (MRBA)
	Region Engineers	R. D. Till	G. Bukoski (MRBA)
	TSC Managers	D. A. Juntunen	R. J. Risser, Jr. (MCPA)
	Assoc. Region Engineers	J. Ruskowski	D. Hollingsworth (MCA)
	T. Kratofil	C. Libiran	J. Becsey (MAPA)
	M. DeLong	R. J. Lippert, Jr.	M. Newman (MAA)
	B. Kohrman	T. L. Nelson	M. Nystrom (AUC)
	J. Shinn	T. Phillips	J. Murner (MRPA)
			R. Brenke (ACEC)